

L Number	Hits	Search Text	DB	Time stamp
1	3232	bonding same capillary	USPAT; US-PGPUB	2003/02/14 15:52
2	1329	(bonding same capillary) and semiconductor	USPAT; US-PGPUB	2003/02/14 15:52
3	795	((bonding same capillary) and semiconductor) and (conductive or conductor)	USPAT; US-PGPUB	2003/02/14 15:53
4	643	((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)	USPAT; US-PGPUB	2003/02/14 15:53
5	473	((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)) and ball	USPAT; US-PGPUB	2003/02/14 15:53
6	384	(((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)) and ball) and @ad<=20010322	USPAT; US-PGPUB	2003/02/14 15:01
7	2648	bonding same capillary	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:52
8	1013	(bonding same capillary) and semiconductor	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:52
9	66	((bonding same capillary) and semiconductor) and (conductive or conductor)	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:53
10	58	((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:53
11	27	(((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)) and ball	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:54

DERWENT-ACC-NO: 1996-381392  
DERWENT-WEEK: 199638  
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TITLE: Capillary for wire bonding appts. - has curve  
surface in concave shape  
which provided at end part of bump formed on electrode pad  
of integrated  
circuit chip

PATENT-ASSIGNEE: MATSUSHITA DENKI SANGYO KK[MATU]

PRIORITY-DATA: 1994JP-0327955 (December 28, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
PAGES	MAIN-IPC	
JP 08186117 A	July 16, 1996	N/A
009	H01L 021/321	

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP 08186117A	N/A	1994JP-0327955
December 28, 1994		

INT-CL (IPC): H01L021/321; H01L021/60

ABSTRACTED-PUB-NO: JP 08186117A

BASIC-ABSTRACT: The capillary forms a bump (27,27') on an  
electrode pad (13) of  
an integrated circuit chip (6). It presses the end part of  
a ball-shape metal  
wire on the electrode pad. A press mechanism presses a  
ball-like end part of  
the bump in the electrode pad.

The metal wire provided at the press mechanism is supplied  
by a conductive  
outlet hole. A curve surface (24) in a concave shape is  
provided at the end  
part of the bump on the electrode pad.

ADVANTAGE - Forms curve surface easily in end part of bump

through ball bonding  
and plating method. Provides flexible and practical curve  
surface. Improves  
electric conduction characteristic of semiconductor device.

Provides capillary  
that increases bonding strength and obtains reliable  
electric connection of  
bump and terminal electrode of circuit substrate.

CHOSEN-DRAWING: Dwg.1/14

TITLE-TERMS:

CAPILLARY WIRE BOND APPARATUS CURVE SURFACE CONCAVE SHAPE  
END PART BUMP FORMING  
ELECTRODE PAD INTEGRATE CIRCUIT CHIP

DERWENT-CLASS: U11

EPI-CODES: U11-D03B1; U11-E01A;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N1996-321594